large and marked tree near the landing-place. The tidal wave on this portion of New Pomerania had rendered completely desolate a coast formerly covered with dense forest for a breadth of about 1 kilometre. Large spaces had been reduced to a swamp covered with trees heaped above one another, broken coral rocks, sea-sand, and a quantity of putrid fish. Measurements made at the declivities here give a height for the tidal wave of 12 metres (39 feet).

"As was to be expected, the tidal wave had also left its mark on other coasts of the German Protectorate, without having, however, caused any serious damage. In Hatzfeldt Hafen, on the coast of New Guinea, a noise like firing was heard on March 13, shortly after 6 a.m., from a north-north-easterly direction, and at 6.40 a.m. came an astonishingly high tidal wave from the north that rose 2 metres (6½ feet) above the highest flood-mark, and then receded with such violence that half the port was dry. The sea now rose and fell at intervals of three to four minutes, which lasted until 9 a.m.

"At 8 a.m. the height of the tidal wave stood at 7 to 8 metres (23 to 26 feet), so that the station was in imminent danger. In the course of the forenoon the movement gradually subsided, although the water still continued to rise and fall with steady intervals until 6 p.m., when it resumed its normal condition.

"In Kelana, the newly-established plantation near Cape King William, the phenomenon occurred from north-east at 6.30 a.m. The first wave forced itself 25 feet on the land the fourth, however, 35 feet; this was the greatest of the twenty waves observed, which came about every three minutes. The phenomenon was not observed here to be longer than an hour in occurring. No other circumstance of a striking nature was perceptible. The weather was calm and dull. On the morning of the 14th of March the whole coast to some distance was strewn with small pumice stones.

"From Matupi it was reported that from 8.15 until near 11 a.m. the sea receded at times from the island 12 to 15 feet below the lowest water mark, and then rose in several waves to the same height above high water mark. The phenomenon appeared chiefly on the south-east and north side of the island, the west side remaining untouched. The waves came partly from south, partly from west-north-west. The water appeared disturbed in its depths; it had a dark appearance, and carried discoloured foam. Neither earthquakes nor any subterranean rumblings were noticed. The weather was clear, with a gentle south-east breeze. On the south side of Gazelle Peninsula the phenomenon was also noticed by a ship lying at anchor.

"So far the report in the 'Notices of Kaiser Wilhelm's Land and Bismarck Archipelago.' Of the further movement of the tidal wave, nothing is as yet known, although it is not improbable that it spread further.

"In Sydney (Australia) and Arica (South America), extraordinary commotions of the sea were observed between the 14th and 17th of March, which may possibly have been in connection with this tidal wave. In Arica, as appeared in the *Mercurio* of Valparaiso of the 23rd of March, an immense wave was observed on the 14th of March towards 5 p.m., in the distance, which, increasing as it drew nearer, broke with great force near the pier. Three great waves followed quickly, one after another. Of the vessels busied in taking in cargo, several were shattered, and others capsized. The sea was for some time so agitated that the shipping of merchandize was attended with difficulty. On the island in front of the port the sea broke for a still longer period with great violence.

"According to the English journal NATURE (vol. xxxviii. p. 491), the tidal curves on the self-registering water-gauge in Sydney, showed on the 15th, 16th, and 17th of March, deviations from their customary form which may have been caused by the waves of an earthquake."

## NOTES.

THE fifteenth general meeting of the Association for the Improvement of Geometrical Teaching was held on Saturday last at University College, London. After the reading of the Report of the Council, Mr. R. B. Hayward, who had been President for eleven years, resigned the presidency, and the post was conferred on Mr. G. M. Minchin, Professor of Applied Mathematics in the Royal Indian Engineering College at Cooper's Hill. In the place of Mr. Moulton, Q.C., Mr. Hayward was elected a Vice-President; while the other Vice-Presidents—the Rev. G. Richardson, Mr. R. Levett, and Mr. R. Tucker—retain their posts. In the course of his valedictory address, the retiring President remarked that, though they had not quite attained the expectations of some of their more ardent reformers, still they had met with a fair measure of success. Their influence was rather indirect than direct, and it must be expected that their advance would be, while steady, yet comparatively slow. The new President (Prof. Minchin) read a paper on "the vices of our scientific education."

IN the correspondence of Mrs. Austin, just published by her granddaughter, in the work entitled, "Three Generations of Englishwomen: Memoirs and Correspondence of Mrs. John Taylor, Mrs. Sarah Austin, and Lady Duff Gordon," there is an interesting and whimsical letter from Humboldt, dated Sans Souci, 1844. Mrs. Austin had written to him, suggesting a translation of his work, "Ansichten der Natur," into English. He jokes about the defects of his book from the translator's point of view, with its notes larger than the text, its "Teutonic sentimentality," and the impossibility of finding a title in English for it. He then proceeds:—"Alas! you have got someone in England whom you do not read, young Darwin, who went with the Expedition to the Straits of Magellan. He has succeeded far better than myself with the subject I took up. There are admirable descriptions of tropical nature in his journal, which you do not read because the author is a zoologist, which you imagine to be synonymous with 'bore.' Mr. Darwin has another merit—a very rare one in your country—he has praised me."

ON Tuesday, January 15, a new wing of the Leeds Mechanics' Institute, comprising the School of Science and Technology and Boys' Modern School, was opened by Sir James Kitson. The Leeds Mechanics' Institute was founded sixty-four years ago, and, like some other establishments of the same kind in various parts of the country, it has always recognized the need, not only from an intellectual but from an industrial point of view, of scientific education. Thanks, in part, to the wholesome influence of the Yorkshire College, Leeds, there has been lately in all the manufacturing centres of Yorkshire a remarkable growth of opinion as to the importance of this question; and the action taken by the Mechanics' Institute in adding to its buildings a set of rooms for scientific training must be regarded as a characteristic and eminently satisfactory sign of the times. The extension has involved a total cost of nearly £7000. The building is three stories high. The class-rooms on the ground-floor will be used for the Boys' Modern School. On the first floor a series of rooms will be used jointly by the Boys' Modern School and the School of Science and Technology. On this floor there is a physics lecture theatre, with a sloping gallery capable of accommodating about fifty students. The metallurgical laboratory, the balance room, and the chemical laboratory occupy the second floor, which is reached by a wide stone staircase. In the former twenty-two students will be able to work at the same time.

EVERYONE who is in the habit of using Whitaker's Almanac is now familiar with the issue for 1889. It may not, however, be too late to say that the work as a whole is more valuable than ever, and that especial credit is due to the editor for the excellent sections on subjects relating to astronomy. We may call his attention to the fact that for some mysterious reason the office of NATURE is not included in the list of newspaper offices in London.

THE prevention of smoke formed the subject of an interesting discussion at a recent meeting of the Institution of Engineers and Shipbuilders in Scotland. Mr. G. C. Thomson, who had read a paper on the subject, said, in summing up the debate, that he would like to add to his paper the effect of a day's fog in London. For the twenty-four hours ending Thursday morning, November 17, 1887, the gas sent out by the Gas light and Coke Company was 103,664,000 cubic feet, or 35,000,000 excess over the same day in 1886. The gas was sold at 3*s.* per 1000 feet, and was equal to £15,500, so that the value of the excess in money equalled £5250—a sum that would go a great way in putting many of the faulty furnaces in London into good working order, so that they would give no smoke. Mr. Thomson also called attention to the loss of health and life which a foggy day always entailed on a community.

AT the meeting of the Royal Geological Society of Ireland on January 9, Mr. Kinahan communicated a paper, a general supplement to his previous articles on the "Economic Geology of Ireland." In this the suggestion as to the pre-Cambrian age of some of the Irish rocks is of interest. The author pointed out that it is highly improbable that any Irish rocks are equivalents of the American Laurentians or Huronians; but in reference to the "Gap rocks" of the epoch between the Huronian and Primordial, called by Chamberlain the Agnotozoic epoch, he suggested that possibly rocks of this age might be found. He mentioned the Bray Head series, which he would provisionally call "Oldhamians," as rocks that seem to be evidently older than the Welsh Cambrians; and as the Welsh Cambrians by their fossils seem to be the equivalents of the American Primordials, any rocks older than the Welsh Cambrians ought to belong to strata of Agnotozoic age. The suggestion that the Oldhamians are older than the Welsh Cambrians was founded on the profound break between them and the Irish equivalents of the Llandriloes; while in Wales the Cambrians pass conformably upwards into the Welsh Llandriloes. The author then pointed out that if the Oldhamians are of pre-Cambrian age (Agnotozoic) it is probable the rocks of North-West Mayo (Mullet) are similarly Agnotozoic, while it is possible, if not probable, that Griffith's older rocks in Ulster (Donegal, Tyrone, and Antrim?) may also be Agnotozoic.

THE Quarterly Record of the Royal Botanic Society for April-June 1888 contains the report of a lecture, by Mr. G. J. Symons, on sunshine. The subject is discussed chiefly from an instrumental point of view, under the heads of thermometric solar radiation, sunshine-recorders, and sunlight-recorders. Mr. Symons points out that Newton, in the seventeenth century, compared the readings of two thermometers, one in the sun and the other in the shade. De Saussure, in 1774, was the first to make an apparatus for direct observations upon the heat of sunshine, and, in 1837, the subject was taken up by Sir John Herschel, M. Pouillet and others. Their researches led to the use of the black-bulb thermometer *in vacuo*, while bright and black-bulb thermometers were used by Arago in 1844. This class of instruments was further improved by the Rev. F. W. Stow, in 1869. The first direct sunshine-recorder was designed by the late Mr. J. F. Campbell, and erected by him in Whitehall, in December 1854; it consisted of a mahogany bowl, with a hollow sphere of glass, nearly filled with acidulated water, to form a lens. In December 1857, a solid glass sphere was substituted; the observations were discussed by Profs. Roscoe and Stewart (Proc. Roy. Soc., June 1875). Finally, towards the end of 1879, after various experiments at Greenwich and Kew Observatories, Prof. Stokes designed the card supporter which is now used by the Meteorological Office and other institutions. The observations have been discussed by Mr. Scott for the years 1880-85 (Quart. Journ. Roy. Met. Soc., July 1885). Mr. Blanford stated, some years ago, that this instrument would give better results than the thermometric method, which has now been practically discontinued in India. Of the photographic sunlight-recorders, the principal are those by Mr. J. P. Jordan and Prof. McLeod. Another pattern has been designed by Dr. Maurer, and illustrated in *La Nature* for May 19, 1888, in which it is stated that the paper can be left unchanged for twenty days. Mr. Symons concludes his interesting lecture by remarks upon the action of light upon vegetation.

REPORTS of earthquakes have lately been received from many different parts of the world. At Flekberö, in the Torrisdal, in South Norway, there was an earthquake on December 27, 1888. Shocks were felt at Herisau, Zug, Frauenfeld, and Zürich, and at Wyl (Aargau), on January 1, at 5 a.m. A severe shock occurred at Constance on January 7, at three minutes to 12 noon. It continued for two seconds, and seemed to move from west to east. It was also noticed in several parts of North Switzerland; and at Wattwyl the shock was so severe that the inhabitants rushed out of their houses in terror. At St. Gallen, the pictures, curtains, &c., swung about on the walls, and the woodwork creaked. According to a telegram sent through Reuter's agency from Smyrna on January 21, a disastrous earthquake occurred last Thursday at Sparta (?), in Asia Minor, in which 300 houses were destroyed. A shock was felt at Athens on January 22, as well as at Megara and Arachova. It was accompanied by heavy rains and a violent gale.

ON Friday morning last, a shock of earthquake was felt in the county of Midlothian. Of this earthquake we may have something to say on a future occasion.

REFERRING to the Calcutta earthquake of December 23 last, which is said to have been the most severe felt since 1885, the *Englishman* says that it took place at 10.50 p.m., and lasted for about a minute and a half. It was severe enough to try the stability of substantial houses. Sleepers were awakened by the loud rattling of doors and windows, and pemka-frames and lamps swung about in a curious fashion. So far as could be judged, the direction of the wave was from east to west. The disturbance was wide-spread, but appears to have varied in intensity in different places.

THE papers on "Modern Views of Electricity," by Prof. Oliver Lodge, which have been appearing in NATURE, will soon be published as a volume of the "Nature Series."

A WORK on "The Principles of Inductive or Empirical Logic," by Dr. John Venn, is about to be issued by Messrs. Macmillan. It contains the substance of lectures delivered in Caius College for a number of years past. The general treatment of the subject is somewhat more in accord with that adopted by J. S. Mill than with that of the majority of recent English works on logic.

MESSRS. MACMILLAN AND CO. have in the press Part I. of "A Graduated Course of Natural Science for Elementary and Technical Schools and Colleges," by M. B. Loewy. The author's object is to place the teaching of natural science in schools upon an exclusively experimental basis, and to make it at the same time thoroughly methodical and systematic, the scholar being led from known and easily-understood facts to less-known and more difficult results. In this way, it is thought, instruction in science may be brought into close harmony with educational methods employed in other subjects of school teaching.

Messrs. Macmillan and Co. will also issue soon "Hydrostatics for Beginners," by F. W. Sanderson. The work is based on the author's experience in teaching physics to large classes of boys varying from 12 to 19, and in arranging and conducting each class in laboratory work.

A new compound, containing aluminium in a lower state of oxidation corresponding to ferrous iron, has been obtained by Prof. Hampe-Clausthal. It is a double fluoride of sodium and aluminium of the composition $2NaF . AlF_2$. In the earlier experiments which resulted in the production of this interesting substance, cryolite, the natural fluoride of sodium and aluminic aluminium, $6NaF . Al_2F_6$, was fused for several hours in a gas-carbon crucible along with a quantity of metallic aluminium. Air was rigidly excluded during the fusion, a current of hydrogen being led through the crucible by means of tubes inserted through the air-tight cover. The carbon crucible was protected from the direct flame of the furnace by means of an outer one of platinum. Under these circumstances the metal dissolved either wholly or in part, depending upon the amount present, in the melted cryolite; a little carbide of aluminium was at the same time formed and disseminated throughout the mass, especially aggregating near the surface, in minute particles, accompanied by small globules of the metal itself. After separation of these particles by various means as completely as possible, it was found that about half as much aluminium had entered into combination as that originally contained in the cryolite, indicating the probability of the course of the reaction being as follows: $6NaF . Al_2F_6 + Al = 3(2NaF . AlF_2)$. It was afterwards found, however, that by substituting a polished wrought-iron crucible for the carbon one, a product was obtained perfectly free from these particles, carbide of aluminium being no longer a possible product of the reaction, and the excess of metallic aluminium forming an alloy with the iron upon the walls of the crucible above the fused fluoride. Hydrogen was led through as before in order to exclude oxygen. 58 grammes of cryolite were fused for 5½ hours with 29·5 grammes of the metal; at the end of the operation the homogeneous white substance formed at the bottom of the crucible on cooling was submitted to analysis, with results which entirely confirm the above supposition, the numbers corresponding to the formula $2NaF . AlF_2$. The new compound, which in outward appearance very much resembles cryolite, must therefore be considered as sodium aluminious fluoride. It may be remarked that all three elements were estimated, the sodium and aluminium in the ordinary manner, as chloride and hydrate, while the fluorine, which was found most difficult to determine satisfactorily and required prolonged treatment, was eventually weighed in the form of calcium fluoride. Now that an aluminious salt has at last been obtained, it is to be hoped that further attempts may follow, having for their object the formation of other compounds corresponding to the well-known salts of ferrous iron.

Referring to the discovery, last year, at Sandnaes, near Stavanger, in Norway, of enormous deposits of infusorial earth, at the time communicated by Lord Salisbury to the Royal Society, Prof. P. Waage, the well-known Norwegian chemist, is of opinion that this earth should be suitable for the preservation of food, after having been subjected to a process of intense heating, whereby all organic matter should be destroyed. Prof. Waage thinks that sterilized infusorial earth would be very much better as a means of preservation than boric acid, &c., now used in the preservation of fish.

Last autumn, a family of the hazel-mouse, *Myoxus avellanarius*, was discovered in a wood at Slagelse, in Denmark. It is said that the animal had never before been found in that country. The mice had made their nest—ball-shaped in appearance—of grass and leaves between the branches of a tree, 6 feet above the ground. It had a circular entrance-hole at the side. Two of the animals are now hibernating in the possession of a farmer.

The Museum of the Christiania University has just been enriched with a Runic stone, hitherto unknown, found in the Romsdal. The writing is in older Runic characters, and very clear, but part of the stone is missing. It is believed to have been a memorial stone. Some years ago, a similar stone was found in the same locality, but the Runes are illegible.

Thanks to strict preservation, and to the fact that the inhabitants are realizing the value of the bird, the eider has greatly increased in number in Iceland during recent years. The people do all in their power to attract the bird to their property. Among these attractions are bells worked by the wind or by water, the hanging up of dress material of a glaring colour, and the keeping of brightly-coloured fowls. A Society has been formed for the granting of premiums for the killing of animals preying upon the eider, and, last year, 1155 such prizes were awarded.

There has been a very marked increase in the number of visitors to the South Kensington Museum during the last year, the numbers rising from 788,412 in 1887 to 897,225 in 1888. But this increase of 108,813 is quite put in the shade by that of 500,582 at the Bethnal Green Museum, which, in its total of 910,511 for the past year, has, as will be seen, distanced the parent institution. This great influx of visitors, more than double that of the previous year, was, no doubt, in great measure due to the exhibition there of Her Majesty's Jubilee presents after they had been shown to the West End at St. James's Palace. But some part of the increase must be attributed to the fine collection lent by the Hon. W. F. B. Massey Mainwaring. The increase in numbers at South Kensington was not confined to the main Museum, but extended to the separate collections—the Science Museum and the India Museum—which are in the galleries at the west side of Prince's Gate, and which are not open in the evening, as are, on three evenings in the week, the collections in the main building on the east of Prince's Gate, and the Bethnal Green Museum. The numbers visiting the Science collections increased from 177,465 in 1887 to 258,796 in 1888, notwithstanding the fact that the galleries have been severed by the new road cut across the Horticultural Gardens, while the visitors to the India Museum increased from 116,574 to 152,911. The numbers of visitors are taken in all cases by turnstiles.

We have received several letters on "Hares Swimming." Mr. G. H. Kinahan writes that he believes the phenomenon to be not uncommon. "When I was stopping at Inver Lodge, Co. Galway," he says, "the keeper told me a hare had a nest with three young ones on a small island in the lake, and that it left them most of the day-time. I went with him to the island, which was about 30 yards in diameter, and about 100 yards from the shore, and after searching it most carefully, we could only find the three leverets. Sheep are animals that in general keep out of water, yet in Connemara I have seen them quite naturally swimming a river or even a lake." "E. H." writes:—"I was by the little River Arun below the old mill at Pulborough one day, when I saw a hare quietly cantering down the opposite field towards the river. A bank hid the actual crossing of the river from me; but when the hare emerged from the water into the field in which I was standing, I was amused to see the dog-like fashion in which it stood and shook off the moisture, scattering the spray far and wide, before resuming its leisurely canter. The act had the air of being habitual." Mr. G. Plarr, writing from Tunbridge, tells us of a hare which he saw many years ago while he was walking along a mill-stream in El-ass. The hare was being chased by some boys in a meadow on the opposite side of the stream. It disappeared in the water, and emerged on the side on which Mr. Plarr was walking. Without stopping to shake the water away, it made off with great speed. The creature presented a strange appearance, its head seeming to be large beyond all proportion to its body. This was, of course, due to the fact that the head had been kept dry above water, while the rest of the body had been immersed.

MESSRS. DULAU AND CO. have sent us a catalogue of zoological and palæontological works, including works on Echinodermata, Vermes, and Crustacea.

IN the letter on "Alpine Haze," by Antoine d'Abbadie (p. 247, lines 13 and 17 from the top), *for* "earth-haze" *read* "earth-ashes," and *for* "Ventouk" *read* "Ventoux."

THE additions to the Zoological Society's Gardens during the past week include a Macaque Monkey (*Macacus cynomolgus* ♂) from India, presented by Mrs. Henderson; a Rhesus Monkey (*Macacus rhesus* ♂) from India, a Brown Capuchin (*Cebus fatuellus*) from Brazil, deposited; two White Ibises (*Eudocimus*, sp. inc.) from Central America, purchased; a Rufous-necked Wallaby (*Halmaturus ruficollis* ♂) from New South Wales, received in exchange.

## *OUR ASTRONOMICAL COLUMN.*

DISCOVERY OF A NEW COMET.—A faint comet was discovered on January 14, at 18h. 4·7m., by Mr. W. R. Brooks, of Geneva, New York. Its position at the time of discovery was R.A. 18h. 4m. 0s., Decl. 21° 20′ S. The comet was moving rapidly towards the west.

MINOR PLANETS.—Herr Palisa at Vienna discovered a minor planet on January 4, which may possibly be Siwa, No. 140. Should it be a new planet, it will be No. 282, and Herr Palisa's sixty-ninth discovery. Three minor planets, all discovered by Herr Palisa, have recently been named. No. 278 has been called Paulina; No. 279, Thule; and No. 280, Philia.

THE OBSERVATORY OF TOKIO.—An Astronomical Observatory has just been instituted at Tokio, Japan, by the combination of the astronomical portions of the old Naval Observatory and of the Home Office, together with the Astronomical Observatory of the Imperial University. The site of the old Naval Observatory has been selected for the new institution, the meteorological portion of the former having been transferred to the Central Meteorological Observatory of the Home Office. The principal instruments of the new Observatory are a Repsold meridian instrument of 5¼ inches aperture; a transit-circle, by Merz and Repsold, of 5 inches aperture; and two equatorials, the one by Troughton, of 8 inches, and the other by Merz, of 6½ inches aperture. The staff of the institution has not yet been fully organized, but Prof. H. Terao has been appointed Director, and has commenced regular observation. The approximate position of the Observatory is—longitude E. of Greenwich, 139° 44′ 30″·3; N. latitude 35° 39′ 17″·5.

## *ASTRONOMICAL PHENOMENA FOR THE WEEK* 1889 *JANUARY* 27—*FEBRUARY* 2.

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

*At Greenwich on January* 27

Sun rises, 7h. 47m.; souths, 12h. 13m. 5·4s.; sets, 16h. 39m.: right asc. on meridian, 20h. 40·9m.; decl. 18° 19′ S. Sidereal Time at Sunset, 1h. 8m.

Moon (New on January 31, 9h.) rises, 3h. 54m.; souths, 8h. 22m.; sets, 12h. 43m.: right asc. on meridian, 16h. 48·9m.; decl. 19° 10′ S.

| Planet. | Rises. | Souths. | Sets. | Right asc. and declination on meridian. | |
|---|---|---|---|---|---|
| | h. m. | h. m. | h. m | h. m. | ° ′ |
| Mercury.. | 8 30 | 13 24 | 18 18 | 21 52·5 | 13 19 S. |
| Venus ... | 9 18 | 15 7 | 20 56 | 23 35·8 | 2 57 S. |
| Mars ... | 9 6 | 14 34 | 20 2 | 23 2·4 | 7 2 S. |
| Jupiter ... | 5 29 | 9 24 | 13 19 | 17 51·9 | 23 5 S. |
| Saturn ... | 17 24* | 0 56 | 8 28 | 9 21·9 | 16 37 N. |
| Uranus ... | 23 33* | 4 56 | 10 19 | 13 22·3 | 7 59 S. |
| Neptune.. | 11 39 | 19 22 | 3 5* | 3 50·9 | 18 25 N. |

* Indicates that the rising is that of the preceding evening and the setting that of the following morning.

| Jan. | h. | |
|---|---|---|
| 28 | 9 | Jupiter in conjunction with and 1° 42′ south of the Moon. |
| 30 | 14 | Mercury at greatest elongation from the Sun 18° east. |
| Feb. | | |
| 1 | 15 | Mercury in conjunction with and 4° 24′ north of the Moon. |
| 2 | 22 | Mercury at least distance from the Sun. |
| 2 | 23 | Mars in conjunction with and 3° 57′ north of the Moon. |

### *Variable Stars.*

| Star. | R.A. | Decl. | | | |
|---|---|---|---|---|---|
| | h. m. | ° ′ | | h. m. | |
| U Cephei ... ... | 0 52·5 | 81 17 N. | Jan. 28, | 20 31 | *m* |
| | | | Feb. 2, | 20 11 | *m* |
| λ Tauri... ... ... | 3 54·6 | 12 11 N. | Jan. 29, | 0 11 | *m* |
| | | | Feb. 1, | 23 3 | *m* |
| η Geminorum ... | 6 8·2 | 22 32 N. | Jan. 30, | | *m* |
| ζ Geminorum ... | 6 57·5 | 20 44 N. | ,, 28, | 3 0 | *m* |
| | | | Feb. 2, | 3 0 | *M* |
| R Canis Majoris ... | 7 14·5 | 16 11 N. | Jan. 28, | 19 8 | *m* |
| | | and at intervals of | | 27 16 | |
| U Monocerotis ... | 7 25·5 | 9 33 S. | Feb. 2, | | *m* |
| S Cancri ... ... | 8 37·6 | 19 26 N. | ,, 1, | 20 7 | *m* |
| T Vulpeculæ ... | 20 46·8 | 27 50 N. | Jan. 29, | 22 0 | *m* |
| | | | ,, 31, | 0 0 | *M* |
| Y Cygni ... ... | 20 47·6 | 34 14 N. | ,, 28, | 17 40 | *m* |
| | | and at intervals of | | 36 0 | |
| W Cygni ... ... | 21 31·9 | 44 53 N. | Feb. 2, | | *M* |
| δ Cephei ... ... | 22 25·0 | 57 51 N. | ,, 2, | 22 0 | *M* |

*M* signifies maximum; *m* minimum.

### *Meteor-Showers.*

| | R.A. | Decl. | |
|---|---|---|---|
| Near τ Leonis ... ... | 169° | 4° N. | Very swift. |
| ,, α Coronæ ... ... | 235 | 26 N. | Very swift; streaks. |

## *GEOGRAPHICAL NOTES.*

THE International Geographical Congress will be held at Paris from August 5 to August 10 next. The Geographical Societies of London, Berlin, Leipzig, Manchester, Edinburgh, New York, Melbourne, Lisbon, Antwerp, and Milan, and many French Societies will be represented at the meeting.

M. EUGENE MARKOW sends to the French Geographical Society an interesting account of his recent ascent of Mount Ararat. He and his companion, after passing the night among the rocks at a height of 13,000 feet, began their ascent on August 13, at 5 a.m. Soon they passed a conical rock which rises on the south-east face of Ararat, and here M. Markow places the limit of perpetual snow on the mountain. From the base of the rock extends in an opposite direction a broad plain of *névé*, which reaches the summit at a slope of 35°. Underneath this *névé* was heard the sound of a stream formed of the melted ice. At the height of 14,800 feet, M. Markow found among the rocks a *Coccinella septempunctata* of a very bright red. At 15,500 feet, some flowers were found on a small sandy eminence. At 2 p.m. the party reached the foot of the sacred summit of the mountain. This summit presents a vast extent of snow, separated into two by a precipice commencing on the north-east side, and getting broader and deeper as it reaches the south-east. Part of the right summit is almost entirely free from snow, and is covered with small stones. The left summit, on the north-west, presents a plateau covered with snow, but having a small elevation in the middle. It is much larger than the right summit.